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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MOTTOLA, STEVEN J

ART UNIT PAPER NUMBER

2817

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

080950

Applicant(s)

Harrison

Examiner

Mottola

Group Art Unit

2817

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on August 4, 2003.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-32 is/are pending in the application.
- ☐ Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1-32 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement.

Applicant Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This claim refers to “the sub-threshold regime” and “the threshold level” neither of which have antecedent basis. Further, the term “regime” is not understood in this context, and perhaps should read --region--.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,5,6,9-12,15,19-21 and 23-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumgartner et al.

Baumgartner et al disclose a biomedical amplifier that is integrated on a chip 100 as shown in fig. 3 that rejects the effects of offset voltages (see col. 9, lines 24-26) and operates at frequencies less than 500 hz (col. 2, lines 13-19). Thus the limitations of claims 1 and 19 are clearly met. The applicant has argued that the amplifier of Baumgartner is not “fully integrated” as claimed because the amplifier is connected to external circuitry that is not on the chip 100; the Examiner submits that such external connections are inherent and not excluded by the claims; indeed the applicant’s device would have to include connections to electrical elements ‘off chip’ in any practical use of

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the invention. Baumgartner et al refer to their device as 'an integrated circuit' (abstract); it is shown in fig. 3 as chip 100. Regarding claim 2, col. 2, lines 2-3 of Baumgartner et al specify possible offset voltages up to 20 V. Claims 5 and 6 specify intended uses of the amplifier, though note that the signals of Baumgartner et al are in any case bioelectrical (figs. 1 and 2). Likewise, the limitations of claim 23 are met as described w.r.t. claims 1 and 19 above and the reference to 'neural' signals, argued by the applicant as not disclosed by Baumgartner et al, is regarded as an intended use. It is noted that the applicant appears to use the invention with 'neural', 'biopotential' or 'muscle' signals (claim 6) interchangeably. The electrodes and connections thereto referenced in claims 24 and 25 are shown in figs. 1-2 of Baumgartner. Independent claims 9,20,26 and 31 specify the use of pseudo resistors. Baumgartner et al anticipates the use of MOS pseudo resistors as claimed, see col. 16, line 62 to col. 17, line 21 for instance. In re claims 12,15 and 31, note that offsets from 100mV up to 20 V are envisioned by Baumgartner et al.(col. 1, line 65 to col. 2, line 3.) Regarding claim 21, the claimed transistor pair could be read on transistors 616,620 of fig. 6 of Baumgartner et al. for instance. Regarding claims 27-30 see the rejection of like claims 24-25 above.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 3-4,7,8,13,14,16-18 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumgartner et al.

These claims specify specific noise and power consumption ranges that are result effective variables that would vary with component selection and intended use in a known manner. Note further that low noise and low power consumption would have been obvious design goals even though specific ranges are not given by Baumgartner et al., which addresses noise issues extensively (see for instance col. 2, lines 13-31, col. 9, lines 4-52, etc. and note further that the device of Baumgartner et al may be battery powered (col. 2, line 38) so that power consumption would have been an important consideration. Regarding claims 7,8,16,17 and 32, the use of two resistors in series would not of itself be significant unless a functional connection to a node therebetween were claimed. The specific chip size of claim 18 would be a design parameter based on the intended use.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Mottola whose telephone number is 703-308-4914. The examiner can normally be reached on M-Th from 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Pascal, can be reached on (703) 308-4909. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Steven J. Mottola
Primary Examiner